REMARKS

In view of the above amendment and the following discussion, the Applicant submits that none of the claims now pending in the application are made obvious under the provisions of 35 U.S.C. § 103. The Applicant herein cancels claims 3, 15, 16 and 17, without prejudice, and amends claims 1, 8 and 14. Support for the amendments may be found in Applicant's specification in at least paragraph [0021]. Various claims have also been amended to address various informalities. Thus, the Applicant believes that all of these claims are now in allowable form.

I. REJECTION OF CLAIMS 1-22 UNDER 35 U.S.C. § 103

A. Claims 1, 2, 7, 8, 13-16 and 22

The Examiner has rejected claims 1, 2, 7, 8, 13-16 and 22 in the Office Action under 35 U.S.C. § 103 as being unpatentable over Ando, et al., U.S. Patent Publication No. 2004/0213242, published on October 28, 2004, hereinafter referred to as "Ando" in view of Weil et al., U.S. Patent Publication No. 2002/0093954, published on July 18, 2002, hereinafter referred to as "Weil." The Applicant herein cancels claims 15 and 16, without prejudice, and respectfully traverse the rejection.

Ando teaches an ATM switch. Ando teaches using queues that can prioritize different quality of service categories within ATM and MPLS traffic. (See Ando, para. [0027]). Ando teaches that ATM traffic queues are given priority over MPLS traffic. (See Ando, para. [0055]).

Weil teaches a network incorporating a fault recovery mechanism. In the event of a fault, traffic is switched temporarily to a recovery path. The network then determines a new set of primary and recovery paths taking account of the fault. The traffic is then switched to the new primary paths. The new recovery paths provide protection paths in the event of a further fault. The network nodes at the two ends of a recovery path exchange information over that path so that packets returning to the main path present labels that are recognizable for further routing of those packets. (See Weil, Abstract).

The Examiner's attention is directed to the fact that Ando and Weil, alone or in any permissible combination, fail to teach or suggest the novel concept of a method of

configuring a packet-switched network comprising creating a queue for packets carried inside the traffic engineering tunnel and <u>wherein the queue is shared between two or more traffic engineering tunnels, wherein the queue created for packets carried inside the traffic engineering tunnel is given priority over other traffic,</u> as positively recited by the Applicant's independent claims 1, 8 and 14. Specifically, the Applicant's amended independent claims 1, 8 and 14 recite:

      1.   A method of configuring a packet-switched network comprising the steps of:

         (i) receiving a request to establish a traffic engineering tunnel across the packet-switched network;

         (ii) at a router traversed by the traffic engineering tunnel, creating a queue for packets carried inside the traffic engineering tunnel; and

         (iii) reserving a bandwidth for the queue in accordance with the request to establish the traffic engineering tunnel, <u>wherein the queue is shared between two or more traffic engineering tunnels, wherein the queue created for packets carried inside the traffic engineering tunnel is given priority over other traffic</u> at the router and the bandwidth for the queue can only be used by packets carried inside the traffic engineering tunnel. (Emphasis added.)

      8.   A method of routing packets in a packet-switched network comprising the steps of:

         (i) receiving a packet at an incoming interface of a router;

         (ii) determining whether the packet has a label identifying a traffic engineering tunnel, thereby identifying that the packet is being carried inside the traffic engineering tunnel; and

         (iii) where the packet is being carried inside the traffic engineering tunnel, sending the packet to <u>a queue associated with the label so that the packet in the queue receives a higher priority over other traffic at the router</u> and receives a bandwidth reserved for the queue associated with the label identifying the traffic engineering tunnel, <u>wherein the queue is shared between two or more traffic engineering tunnels.</u> (Emphasis added.)

      14.   A router comprising:

         (i) a plurality of interfaces;

         (ii) a first processing module that sorts packets received at an interface into those packets that are carried inside a traffic engineering tunnel and those packets that are not carried inside a traffic engineering tunnel, <u>wherein the first processing module sorts the packets at the interface by reading a label in the packet that identifies the traffic engineering tunnel;</u>

         (iii) a first queue which receives from the first processing module only packets carried inside said traffic engineering tunnel, <u>wherein the first queue is</u>

associated with the label identifying the traffic engineering tunnel, wherein the first queue is shared between two or more traffic engineering tunnels;

        (iv) a second queue which receives from the first processing module packets that are not carried inside said traffic engineering tunnel; and

        (v) a second processing module that receives packets from the first and second queues and gives a higher priority to packets received from the first queue. (Emphasis added.)

        In one embodiment, the Applicant's invention teaches a method of configuring a packet-switched network comprising creating a queue for packets carried inside a traffic engineering tunnel and wherein the queue is shared between two or more traffic engineering tunnels, wherein the queue created for packets carried inside the traffic engineering tunnel is given priority over other traffic at the router. Advantageously, the Applicant's invention allows the packet-switched network to prioritize tunnel traffic versus non-tunnel traffic. In one embodiment, Applicants' invention teaches a single queue for tunnel traffic via a plurality of tunnels, and the tunnel traffic is given priority over all other queues. (See e.g., Applicant's Specification, Paragraph [0021]).

        In contrast, the alleged combination of Ando and Weil, alone or in any permissible combination, fails to teach or suggest the Applicant's invention because the combination fails to teach or to suggest a method of configuring a packet-switched network comprising creating a queue for packets carried inside the traffic engineering tunnel and wherein the queue created for packets carried inside the traffic engineering tunnel is given priority over other traffic, as positively claimed by Applicant's independent claims. First, the alleged combination (as taught by Ando) fails to teach or suggest the use of any traffic engineering tunnels. The Examiner, in the Office Action dated March 14, 2008, alleges bandwidth allocation to MPLS and ATM traffic varied per priority is the same as teaching the use of traffic engineering tunnel. The Applicant respectfully submits that simply teaching bandwidth allocation for MPLS and ATM traffic does not teach or suggest that the traffic is transmitted via a traffic engineering tunnel. Nowhere in Ando, does Ando teach or suggest using traffic engineering tunnels to transmit data.

        Moreover, even if Ando can be broadly interpreted that simply teaching MPLS (IP) traffic teaches a traffic engineering tunnel, as alleged by the Examiner, the

Applicant respectfully submits that Ando actually _teaches away_ from the Applicant's invention. Ando teaches using service queues $Q_0 - Q_{N+6}$ for ATM traffic and queues $Q_6 - Q_{N+6}$ for non-ATM traffic. (See Ando, para. [0053] – [0054]). Then Ando explicitly states "priorities are set higher as the upper part of the figure is approached as shown in FIG. 2." (See _Id._ at para. [0055]). FIG. 2 of Ando shows that the non-ATM queues having MPLS traffic _have lower priority_. In stark contrast, the Applicant's invention teaches that _the queue created for packets carried inside the traffic engineering tunnel is given priority over other traffic_.

The Examiner _concedes that Ando does not teach that the packet carried inside the traffic engineering tunnel is given priority over other traffic at the router_. However, the Examiner then alleges that Weil closes this significant gap left by Ando. The Applicant respectfully disagrees. In fact, Weil **teaches away** from the Applicant's invention. Weil teaches using label switched paths where a three bit EXP field of the MPLS header conveys the priority or DiffServ per hop behavior to be applied to the packet, thereby clearly teaching a method that evaluates packet header information for determining priority treatment _regardless of whether or not the packet is carried inside the traffic engineering tunnel_. (See Weil, Para. [0069] - [0070]). That is, Weil teaches using headers to convey priority treatment in stark contrast to Applicant's invention which teaches a queue for tunnel traffic.

As such, Weil fails to bridge the substantial gap left by Ando because Weil teaches away from Applicant's invention and fails to teach or suggest a method of configuring a packet-switched network comprising creating a queue for packets carried inside the traffic engineering tunnel and _wherein the queue is shared between two or more traffic engineering tunnels, wherein the queue created for packets carried inside the traffic engineering tunnel is given priority over other traffic_. For example, Applicant's invention teaches the queue serves multiple traffic engineering channels. (See e.g. Applicant's Specification, Paragraph [0021]). In stark contrast, Ando and Weil fail to teach or suggest a queue _that is shared between two or more traffic engineering tunnels_. Therefore, Ando and Weil fail to render obvious the Applicant's independent claims 1, 8 and 14.

Moreover, dependent claims 2, 7, 13 and 22 depend, either directly or indirectly, from independent claims 1, 8 and 14, respectively, and recite additional limitations. As such, and for the exact same reason set forth above, the Applicant submits that claims 2, 7, 13 and 22 are also patentable over Ando and Weil. As such, the Applicant respectfully requests the rejection be withdrawn.

B.   Claims 3-6, 9-12 and 17-21

The Examiner has rejected claims 3-6, 9-12 and 17-21 in the Office Action under 35 U.S.C. § 103 as being unpatentable over Ando and Weil in view of Nomura (U.S. Patent No. 6,973,504, issued on December 6, 2005, hereinafter referred to as "Nomura"). The Applicant herein cancels claims 3 and 17, without prejudice, and respectfully traverses the rejection.

The teachings of Ando and Weil are discussed above. Nomura teaches a method for allocating network aggregation bandwidth and a network system using the same. The method enables the decrease of required resources for the bandwidth reservation in an inter-site connection network used for communication between communication sites. (See Nomura, Abstract.)

The Examiner's attention is directed to the fact that Ando, Weil and Nomura (either singly or in any permissible combination) fail to teach or suggest a method of configuring a packet-switched network comprising creating a queue for packets carried inside the traffic engineering tunnel and, wherein the queue is shared between two or more traffic engineering tunnels wherein the queue created for packets carried inside the traffic engineering tunnel is given priority over other traffic, as positively claimed by the Applicant's independent claims 1, 8 and 14. (See supra.)

As discussed above, Ando and Weil are devoid of any teaching or suggestion of a method of configuring a packet-switched network comprising creating a queue for packets carried inside the traffic engineering tunnel and wherein the queue is shared between two or more traffic engineering tunnels, wherein the queue created for packets carried inside the traffic engineering tunnel is given priority over other traffic. This significant gap is not bridged by the teaching of Nomura. Nomura only teaches shared bandwidth. The Applicant respectfully contends that simply teaching shared bandwidth

fails to teach a queue that is shared between two or more traffic engineering tunnels. In fact, the cited paragraphs in Nomura fail to teach or mention any <u>queue</u>. As such, the combination of Ando, Weil and Nomura fails to make obvious Applicant's independent claims 1, 8 and 14.

Moreover, dependent claims 4-6, 9-12 and 18-21 depend from independent claims 1, 8 and 14, respectively, and recite additional limitations. As such, and for the exact same reason set forth above, the Applicant submits that claims 4-6, 9-12 and 18-21 are also patentable over Ando, Weil and Nomura. As such, the Applicant respectfully requests the rejection be withdrawn.
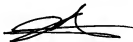
CONCLUSION

Thus, the Applicant submits that all of these claims now fully satisfy the requirements of 35 U.S.C. § 103. Consequently, the Applicant believes that all these claims are presently in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

If, however, the Examiner believes that there are any unresolved issues requiring the maintenance of a final rejection in any of the claims now pending in the application, it is requested that the Examiner telephone <u>Mr. Kin-Wah Tong, Esq.</u> at (732) 842-8110 Ext. 130 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully Submitted,

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